05-24-02

2176
1/7
#53
8/14/0~

Serial Number: 08/813,247
Appn. Filed   :   03/07/97
Applicant   :   Mitsuhiro Aida
Appn. Title   :   Handwriting Text Input System
Examiner/GAU :   Stephen S. Hong / 2176

Mailed on :   May 20, 2002
At   :   Nara City, Japan

Commissioner of Patents and Trademarks
Washington, DC 20231

Sir:

Concerning the Office communication mailed on 03/12/2002, applicant makes the following response.

In paragraph 7 of the Office action, it is stated that claims 84-103 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. As per independent claims 84-103, the claimed term "without a further special key depression" is indefinite, since it is unclear exactly what constitutes "a special key". In other words, it is not clear which keys are considered to be the "special" keys and and which keys are not considered to be special.

In reply thereto, Industry Standard IBM 3270 special function keys include Enter(Return), as well as Clear, Reset, Cursor Sel, PA1-3, PF1-24, Test Request, etc, and Enter(Return) key is usually used to terminate an entry and also to activate a function.

In paragraphs 9 of the Office action, it is stated that claims 84-89 93-99 and 103 are rejected under 35 U.S.C. 102(b), as being anticipated by O'Dell, U.S. Pat. No. 5109352, 4/92.

In reply thereto, applicant states as follows.

It is stated in paragraph 9 that "As per Claims 84-89, 93-99 and 103, O'Dell discloses the claims invention of: entering and storing a plurality of lines of text and original words in a dictionary and replacing the entered lines of text with the unique line of text or the original word without using a special function key; identifying a plurality

of lines of text with the same step(***stem?), and determining the word; random access storing the plural lines of text and the unique line of text.

In reply thereto, applicant emphasizes that O'Dell claims do not correspond to any claim of the present invention. For example, in the present invention, a unique position count (in the claim 90) means the position in a line of text, to determine the unique one in a dictionary, by force, besides the unique one in the dictionary to be determined by the system function. It does not correspond to, eg, claim 1 of O'Dell.

Above mentioned "identifying a plurality of lines of text with the same stem, and determining the word", are not in the O'Dell. For example, assuming that the dictionary has the data, eg, "ship" as a line of text, and "shipped, shipment, shipping, etc" as the relevant words, the present invention makes it possible to find "ship" first, at the time of each input, and then continues to find a unique one among the relevant words, at the time of each following input, as well. It does not correspond to O'Dell.

Moreover, word stemming means taking the stem of a word and generating common variants of the word. For example, Search, Searching, and Searches all have Search as the root stem. As an another example, if the search text is "throws" then the word stem is "throw" and common variants of this stem include "thrower", "throwers", and "throwing."

" 𧾷 " in this case (in O'Dell), is neither stem/root, nor Japanese character. It is one of the radicals (Radical is not stem) for Japanese kanji characters, and those radicals do not necessarily form a leading part (first part, in other words) of Japanese kanji characters, as those of " 刀(Radical) for 茄 ", " 女(Radical) for 妾 ", " 心 (Radical) for 惣 ", " 几 (Radical) for 拠 ", " 𧾷 (Radical) for 距 ", etc.

Examples of radicals and Japanese Kanji characters are given in the attachments.

Each Japanese character in Figure 5 of O'Dell, has no particular relation to each other, and they have different meanings in Japanese. It is neither stem/root, nor Japanese character.

Characters	Meaning	Data String
距	- means "distance"	12313131.3233
踊	- means "dance"	12313132.412331
践	- means "practice"	12313133.33444
路	- means "road"	123131342.4123
跡	- means "site"	123131343.4744
跳	- means "jump"	123131344.4844
踏	- means "step"	12313137.2441233

As for the random access manner, above mentioned - "random access storing,,,,," of O'Dell, is not correct, because O'Dell method is obviously based on a sequential data access method, as mentioned below.

For the random access manner, there are two fundamental methods of storing and accessing data - sequential and/or random (direct, in other word). In case of a small table or a dictionary, data are stored and accessible, one by one, sequentially from the beginning of stored data area. This is called Sequential access data organization which is like the followings in O'Dell, being stored in sequence of data strings of 12313131.3233, 12313132.412331, 12313133.33444, etc, as shown below).

CHARACTERS   MEANINGS   DATA STRINGS - being in sequential and
                                                   ascending order

----

距 - means "distance"   12313131.3233

踊 - means "dance"   12313132.412331

踐 - means "practice"   12313133.33444

etc |

In the present invention, as an example, data are to be mainly organized in a sequential manner and accessed by "Binary Search" (which is not random access) to retrieve data record, collating the entered data with those in the middle of area in the dictionary, dividing data area into 2 to utilize a first part or a latter part to retrieve next, depending on the result of prior collation which was made to compare the input data with those in the dictionary.   For example, data could be stored like that, in the area allocated, e.g., 123131343.4744, some other data, 1231313233, some other data, some other data, 1331342.4123,,,,etc, which are not sequential, and its location to store the data, is determined by randomizing the keyword value of each data.

As an another example, the present invention makes it possible to have "ship" as a line of text, and "shipped, shipment, shipping", etc as relevant words of "ship", in the dictionary. In applying the random access method to the present invention, "ship" is the word to find "ship" first, stored in the random access manner at the time of each input, and "shipped, shipment, shipping", are relevant words stored together with "ship", which are selectable afterwards, to find the unique one among those relevant words (shipped, shipment, shipping), at the time of each following input.

It is also stated in paragraph 9 that "Referring to O'Dell, O'Dell teaches a word processor to enter a plurality of lines of text (FIG.10). O'Dell stores the plurality of characters in a Chinese or Japanese (or European) character dictionary, and allows user to enter the strokes (item 50 in FIG. 10). FIG. 5 shows the plurality of lines of words with the same initial stem, giving the user the visual feedback of the strokes entered for the character input.

In reply thereto, applicant emphasizes that as mentioned before, word stemming means taking the stem of a word and generating common variants of the word.

" 疋 " of O'Dell is neither stem/root, nor Japanese character. It is one of the radicals and those radicals do not necessarily form a leading part of Japanese kanji characters, and form some part of Japanese kanji character. Those examples of " 刀 (Radical) for 茄", " 女(Radical) for 妾", " 心 (Radical) for 惣", " 几 (Radical) for 拠 " are all Japanese radicals and only exist as part of Japanese character.

In paragraph 11 of the Office action, it is stated that claims 90-92 and 100-103 are rejected under 35 U.S.C 103(a) as being unpatentable over O'Dell in view of Shimizu et al., U.S. Pat. No. 5,870,492, 2/99 (filed 6/92).

In reply thereto, applicant makes the following comments.

The method of U.S. Pat. No. 5870492 (Shimizu) is not related to the present invention. The present invention does not have the features of character recognition. Also, there is no relation between O'Dell and Shimizu, as Shimizu relates to the hand-written character recognition, and O'Dell does nothing for the recognition.

According to the specification, U. S. Patent No, 5870492 (Shimizu) relates to an improvement in handwriting character entry apparatus, mentioning the type which has an input device for inputting hand-written characters and a display device, wherein hand-written character pattern inputted by the input device is recognized and a plurality of candidate characters having configurations similar to that of the recognized character pattern are extracted and standard character pattern corresponding to the candidate characters are displayed for selection on the display device, and one of the displayed plural candidate characters that is the intended character for the inscribed character is selected by an operator, pressing a stylus against the inscribed character.

The present invention is not related to the above-mentioned Shimizu.

In paragraph of 12 of the Office action, it is stated that applicant's arguments filed June 12, 2001 have been fully considered but they are not persuasive.

In reply thereto, applicant makes the following comments.

It is stated in the U.S. Patent No. 5109352 (O'Dell) that, in col. 8, line 24+, "As shown in Fig. 1A, the possible strokes used in Chinese characters or Japanese Kanji characters are grouped into seven groups, with most of the possible strokes within each group shown within a square, with each group given a code number."

Also, in col. 10, line 20, it is mentioned that "This invention utilizes the discovery that, when classified in accordance with the classification scheme of Fig. 1A, most Chinese characters and Japanese Kanji characters can be uniquely identified by strings of code numbers where the number of code numbers is usually less than the number of strokes in the character. In reference to the top character in Fig. 5, for example, the string 12313131 is adequate in identifying the character and the remaining four code numbers 3233 are really not necessary for identifying the character."

Also, in col. 20, line 64+, it is mentioned that (in claim 1), "first means for storing a plurality of strings of code numbers, each string representing a character in the collection, wherein the strokes that make up the characters of the collection are classified into a plurality of groups of one or more strokes, each group corresponding to a predetermined code number, each number in a string representing one of the strokes of the appropriate group,,,,, etc."   Fig. 1A is a table setting forth the seven categories of strokes for Chinese characters to illustrate the preferred embodiment of the invention, as stated in the specification of U.S. Pat. No. 5109352 (O'Dell).

In reply thereto, applicant emphasizes again that, the inventor of U.S. Patent# 5109352 (O'Dell) discovered that some characters are uniquely identifiable, only in the examples shown in Fig. 5.   However, O'Dell method is incomplete, illogical, and unpractical, due to the reasons mentioned in this response, including the followings. There would be no application to be able to actually utilize the method of O'Dell, as, for example, O'Dell has no way to distinguish, for example, between 口 and   ᄆ of 踊, between 中 and   ㄓ of 踊, between 叫 and   ㄹ of 踊, and so many Japanese characters unknown to the operator, may suddenly appear on the display, at the time of input.

In Fig. 5 of O'Dell, the candidate characters are shown. It must be an interim result after depressing some stroke-like keys on the keyboard, as it is unable to branch directly to the situation where Fig. 5 is mentioned, in O'Dell.

Based on the method of O'Dell, as one of examples, followings inevitably take place, before having such characters as 距、踊、践、路、跡、etc mentioned in Figure 5 of #5109325 (O'Dell), during the input.

The followings take place, regardless of what was anticipated by the operator. Operators have to encounter the character which is not related to what the operator is

going to input and unexpectedly appears.

(One of examples)

After typing codes upto   ⎸ ㄱ ー   , 口 appears on the display,

< At this point, operator's action is necessary to continue the input process, prior to reaching characters below >

and, after typing codes upto ⎸ ㄱ ー ⎸ , 中 appears on the display,

< At this point, operator's action is necessary to continue the input process, prior to reaching characters below >

and, after typing codes upto ⎸ ㄱ ー⎸ー⎸ , 叫 appears on the display,

< At this point, operator's action is necessary to continue the input process, prior to reaching characters below,

      ***   口、中、叫 are frequently used Japanese characters.

In this case,   口 of 足   equals to 口

                中 of 足   equals to 中

                叫 of 足   equals to 叫

O'Dell: FIG. 5:

CHARACTERS   MEANINGS   DATA STRINGS - being in ascending order

----

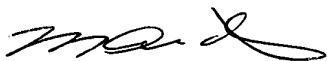| 距	- means "distance"	12313131.3233
踊	- means "dance"	12313132.412331
践	- means "practice"	12313133.33444
路	- means "road"	123131342.4123
跡	- means "site"	123131343.4744
跳	- means "jump"	123131344.4844
踏	- means "step"	12313137.2441233

Applicant emphasizes once again that O'Dell claims do not correspond to any claim of the present invention, and also Shimizu is not related to the present invention, as well.

It is respectfully requested that this patent application be reconsidered, claims 84-103 allowed, and the case passed to issue.

Very respectfully,

Applicant:

Mitsuhiro Aida
MBA & Juris Dr.
3-8-25 Saikujo-cho
Nara City, Nara 630-8453
Japan
Date: May 20, 2002

Attachments (1),(2),(3)